App. No. 09/722,774
Amendment Dated April 6, 2004
Reply to Office Action of January 30, 2004

Amendments to the Claims

Please amend the claims as follows:

1.   (original) A computer-implemented method for compressing data, the method comprising:

determining difference information as a function of the data to be compressed; and

responding to the difference information satisfying a size constraint by encoding the difference information with reference to a set of commonly occurring difference values for a type of the data to be compressed.

2.   (original) The method of claim 1, further comprising, before determining the difference information, storing an initial counter value for the data to be compressed.

3.   (original) The method of claim 1, further comprising:

accumulating the encoded difference information in a buffer; and

storing the contents of the buffer in a profiling data file in response to the buffer accumulating a predetermined amount of difference information.

4.   (original) The method of claim 3, further comprising, before storing the contents of the buffer in the profiling data file, compressing the contents of the buffer.

5.   (original) The method of claim 1, further comprising, if the difference information is timestamp difference information, encoding the difference information as an unsigned quantity with reference to a set of commonly occurring timestamp difference values.

6.   (original) The method of claim 1, further comprising, if the difference information is stack difference information,

encoding the difference information as an unsigned quantity with reference to a set of commonly occurring stack difference values, and

reconstructing a sign of the stack difference from a context of one of function entry and function exit.

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7.   (original) The method of claim 1, further comprising, if the difference information is stack difference information, dividing a quantity represented by the difference information by four before encoding the difference information.

8.   (original) The method of claim 1, further comprising, if the data to be compressed represents stack information collected upon entry to and exit from a function, recording a single difference value for the stack information.

9.   (original) A computer-implemented method for compressing profiling data, the method comprising:

collecting the profiling data;

determining difference information as a function of the collected profiling data;

if the profiling data is timestamp data, encoding the difference information as an unsigned quantity with reference to a set of commonly occurring timestamp difference values; and

if the profiling data is stack data,

encoding the difference information as an unsigned quantity with reference to a set of commonly occurring stack difference values, and

reconstructing a sign of the stack difference from a context of one of function entry and function exit.

10.   (original) A computer-readable medium having stored thereon computer-executable modules comprising:

at least one probe, configured to collect profiling data during execution of an application; and

a buffer, configured to

determine difference information as a function of the profiling data, and

respond to the difference information satisfying a size constraint by encoding the difference information with reference to a set of commonly occurring difference values for a type of the profiling data.

11.   (original) The computer-readable medium of claim 10, wherein the buffer is further configured to, before determining the difference information, store an initial counter value for the data to be compressed.

12.   (original) The computer-readable medium of claim 10, wherein the buffer is further configured to accumulate the encoded difference information, and wherein the computer-executable modules further comprise a logger, configured to receive and store the contents of the buffer in a profiling data file in response to the buffer accumulating a predetermined amount of difference information.

13.   (original) The computer-readable medium of claim 12, wherein the buffer is further configured to, in response to accumulating the predetermined amount of difference information, compress the contents of the buffer and transfer the compressed contents to the logger.

14.   (original) The computer-readable medium of claim 10, wherein the buffer is further configured to, if the difference information is timestamp difference information, encode the difference information as an unsigned quantity with reference to a set of commonly occurring timestamp difference values.

15.   (original) The computer-readable medium of claim 10, wherein the buffer is further configured to, if the difference information is stack difference information,

encode the difference information as an unsigned quantity with reference to a set of commonly occurring stack difference values, and

reconstruct a sign of the stack difference from a context of one of function entry and function exit.

16.   (original) The computer-readable medium of claim 10, wherein the buffer is further configured to, if the difference information is stack difference information, divide a quantity represented by the difference information by four before encoding the difference information.

17.   (original) The computer-readable medium of claim 10, wherein the buffer is further configured to, if the data to be compressed represents stack information collected upon entry to and exit from a function, record a single difference value for the stack information.

18.   (original) A computer-readable medium having stored thereon computer-executable modules comprising:

at least one probe, configured to collect profiling data during execution of an application; and

a buffer, configured to

determine difference information as a function of the collected profiling data,

if the profiling data is timestamp data, encode the difference information as an unsigned quantity with reference to a set of commonly occurring timestamp difference values, and

if the profiling data is stack data,

encode the difference information as an unsigned quantity with reference to a set of commonly occurring stack difference values, and

reconstruct a sign of the stack difference from a context of one of function entry and function exit.

19.   (original) A computer arrangement comprising:

at least one probe, configured to collect profiling data during execution of an application; and

a buffer, configured to

determine difference information as a function of the profiling data, and

respond to the difference information satisfying a size constraint by encoding the difference information with reference to a set of commonly occurring difference values for a type of the profiling data.

20.   (original) The computer arrangement of claim 19, wherein the buffer is further configured to, before determining the difference information, store an initial counter value for the data to be compressed.

21.   (original) The computer arrangement of claim 19, wherein the buffer is further to configured to accumulate the encoded difference information, and wherein the computer-executable modules further comprise a logger, configured to receive and store the contents of the buffer in a profiling data file in response to the buffer accumulating a predetermined amount of difference information.

22.   (original) The computer arrangement of claim 21, wherein the buffer is further configured to, in response to accumulating the predetermined amount of difference information, compress the contents of the buffer and transfer the compressed contents to the logger.

23.   (original) The computer arrangement of claim 19, wherein the buffer is further configured to, if the difference information is timestamp difference information, encode the difference information as an unsigned quantity with reference to a set of commonly occurring timestamp difference values.

24.   (original) The computer arrangement of claim 19, wherein the buffer is further configured to, if the difference information is stack difference information, encode the difference information as an unsigned quantity with reference to a set of commonly occurring stack difference values, and

        reconstruct a sign of the stack difference from a context of one of function entry and function exit

25.   (original) The computer arrangement of claim 19, wherein the buffer is further configured to, if the difference information is stack difference information, divide a quantity represented by the difference information by four before encoding the difference information.

26.   (original) The computer arrangement of claim 19, wherein the buffer is further configured to, if the data to be compressed represents stack information collected upon entry to and exit from a function, record a single difference value for the stack information.

27.   (original) A computer arrangement comprising:

at least one probe, configured to collect profiling data during execution of an application; and

a buffer, configured to

determine difference information as a function of the collected profiling data,

if the profiling data is timestamp data, encode the difference information as an unsigned quantity with reference to a set of commonly occurring timestamp difference values, and

if the profiling data is stack data,

encode the difference information as an unsigned quantity with reference to a set of commonly occurring stack difference values, and

reconstruct a sign of the stack difference from a context of one of function entry and function exit.

28. (new) A computer-implemented method for compressing data, the method comprising:

determining difference information as a function of the data to be compressed;

responding to the difference information satisfying a size constraint by encoding the difference information with reference to a set of commonly occurring difference values for a type of the data to be compressed; and

if the difference information is stack difference information, dividing a quantity represented by the difference information by a positive integer before encoding the difference information.

29. (new) The method of claim 28, wherein the positive integer is at least approximately two.

30. (new) A computer-readable medium having stored thereon computer-executable modules comprising:

at least one probe configured to collect profiling data during execution of an application; and

a buffer configured to:

determine difference information as a function of the profiling data,

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respond to the difference information satisfying a size constraint by encoding the
difference information with reference to a set of commonly occurring difference values
for a type of the profiling data, and

if the difference information is stack difference information, divide a quantity represented
by the difference information by a positive integer before encoding the difference information.

31.   (new) The computer-readable medium of claim 30, wherein the positive integer
is at least approximately two.

32.   (new) A computer arrangement comprising:
at least one probe configured to collect profiling data during execution of an application;
and

a buffer configured to:
    determine difference information as a function of the profiling data,
    respond to the difference information satisfying a size constraint by encoding the
difference information with reference to a set of commonly occurring difference values
for a type of the profiling data, and
        if the difference information is stack difference information, divide a quantity
represented by the difference information by a positive integer before encoding the
difference information.

33.   (new) The computer arrangement of claim 32, wherein the positive integer is at
least approximately two.